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ABSTRACT

The effect of teaching behaviors on student reading achievement in Spanish was investigated. A group of 18 teachers of Spanish reading and their classes were observed across two reading lessons having similar content. Each lesson was presented in two twenty-minute segments, thus allowing for four videotaping sessions. Students were pre- and posttested over a three-month period using the Inter-American Prueba de Lectura, Level II. Teaching behaviors such as emphasizing decoding skills, explaining grammatical rules (structural analysis), engaging students in the oral reading of one or several sentences from paragraphs, and correcting pupil errors in decoding were found to influence student growth positively, while asking students questions about details in the story, explaining vocabulary meaning out of context, and asking students to read whole paragraphs without focusing on reading subskills were found to have negative effects. Regression analysis of selected teaching behaviors and teacher proficiency in Spanish accounted for approximately 70 percent of the observed variance in student learning. (Author/AMH)

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TEACHING READING IN SPANISH: A STUDY OF TEACHER EFFECTIVENESS

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ABSTRACT

The effect of teaching behaviors on student reading achievement in Spanish was investigated. A group of 18 teachers of Spanish reading and their classes were observed across two reading lessons having similar content. Each lesson was presented in two twenty-minute segments, thus allowing for four videotaping sessions. Students were pre- and posttested over a three-month period using the Inter-American Prueba de Lectura, Level II. Teaching behaviors such as emphasizing decoding skills, explaining grammatical rules (structural analysis), engaging students in the oral reading of one or several sentences from paragraphs, and correcting pupil errors in decoding were found to influence student growth positively, while asking students questions about details in the story, explaining vocabulary meaning out of context, and asking students to read whole paragraphs without focusing on reading subskills were found to have negative effects. Regression analysis of selected teaching behaviors and teacher proficiency in Spanish accounted for approximately 70 percent of the observed variance in student learning.

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TEACHING READING IN SPANISH: A STUDY OF TEACHER EFFECTIVENESS

Arnulfo G. Ramírez

With the advent of bilingual education in this country, the teaching of initial reading and subject matter in the pupil's native language has become an area of concern. In the case of Spanish-English bilingual programs, materials have been developed in Spanish to teach such subject areas of the curriculum as reading/language arts, science, math, and social studies.

Teacher training materials have also been developed on such topics as cultural awareness, second language teaching, learning styles, and teaching reading to bilingual pupils. In the area of Spanish reading, the materials prepared by Herbert (1971), Initial Reading in Spanish for Bilinguals, consists of eight training modules (i.e., reading readiness, phonics, syllabication, and story sequence), each module containing work-sheets, illustration and a videotape of teachers engaged in Spanish reading instructional activities in Mexico and Texas. The Santa Cruz Reading in Spanish training system (1977) makes use of an array of instructional media (i.e., filmstrips, audio tapes, printed materials, and games) and includes nine modules (i.e., reading readiness, the use of dialect in reading, word recognition, reading comprehension, basal reader and adaptation of materials, and beginning reading in a second language).

While there has been considerable development of curriculum units to teach reading in Spanish, little is known about how these materials

are actually used by teachers. The relative effects of teacher training materials designed to increase teacher effectiveness in Spanish reading remain to be documented.

The purpose of this study was (a) to investigate the behaviors of teachers currently engaged in Spanish reading instruction in bilingual elementary schools and (b) to identify teaching practices that are associated with student gains in Spanish reading. Through the use of an observational instrument that focused on cognitive behaviors, an effort was made to isolate teaching behaviors that distinguish effective Spanish reading teachers from those less effective. No effort was made to establish the efficacy of the various approaches used to teach initial Spanish reading throughout the Spanish-speaking world (i.e., el método onomatopoéico, el método alfabético, el método fonético, el método global, and el método ecléctico). Thonis (1976) concludes that:

> The various approaches used to teach reading to Spanish speaking pupils in Spanish speaking countries have all enjoyed some measure of success with some pupils. As in teaching reading in English, a method is effective in direct proportion to the skill of the teacher who uses it. Promising approaches can fail in the hands of a poorly trained, indifferent teacher while a method with many inherent weaknesses may be applied successfully by a knowledgeable supportive one. (p. 32)

A more important question regarding the teaching of Spanish reading in the United States is: What constitutes successful reading instruction in a minority language spoken by a subgroup (Engle, 1975)?

Identification of Effective Spanish Reading Teachers

Research studies on teaching effectiveness that focus on student cognitive gains as the criterion for determining if a teacher is effective or not have used one of two definitions: (a) teaching effectiveness defined in terms of relative class score gains over a given period of time (Brophy, 1976; Belgard, Rosenshine, and Gage, 1971; Clark et al., 1976) or (b) teaching effectiveness defined as the teacher's ability to reduce the initial heterogeneity in the achievement level of their classes (Calfee, in McDonald and Elias, 1976).

Each of these definitions has led to different analytical techniques. Teaching effectiveness seen as relative score gains has been examined in terms of simple and partial correlations between teacher behavior and student gains; teaching effectiveness seen as the teacher's ability to improve the performance of the poorer students while maintaining that of the better students has been studied in terms of regression slopes, with effective teachers being those who create flatter slopes and less effective teachers those with steeper slopes. The first definition of teacher effectiveness concentrates on class score as the unit of analysis, while the latter definition utilizes the individual score as its unit of analysis.

In this study, teaching effectiveness is defined as the relative adjusted gain in class mean scores achieved by each teacher. This definition was chosen for two reasons: (a) it was assumed that there are certain teacher behaviors that have an overall group effect, and (b) in view of the small number of students in each Spanish reading class studied, it was considered that an analysis focusing on the

students would lead to very unstable findings.

In discussing the use of adjusted gains as a method to control for initial differences among students, Glass (1977) argues that an ex post facto statistical control cannot be regarded as equivalent to random assignment of pupils to teachers. He notes that classes may still differ on a number of variables such as learning ability or motivation which have been left unmeasured and, thus, uncontrolled. Since teachers volunteered to take part in the present study and their groups were left intact, differences in learning ability or motivation between the classes could still be present.

The degree to which differences in motivation affected the Spanish reading achievement for pupils in this study, who were between the ages 6 and 12, was not controlled. Similarly, no attempt was made to control for the child's cognitive style which could affect Spanish reading achievement. Preliminary findings from research conducted at the Southwest Educational Development Laboratory at Austin, Texas, do support a hypothesized relationship between certain cognitive style dimensions and scores on a standardized reading test. Another uncontrolled factor was the pupil's attitude toward his own variety of Spanish as opposed to the varieties used by the teacher and found in the reading text. Politzer and Hoover (1974) in studying reading achievement among Black children found that the pupil's attitude (positive or negative) toward his own variety of English (Black vernacular) interacted differentially with various methods used to teach reading in "Standard" English.

Definition of Spanish Reading Behaviors

On the basis of curriculum-specific teaching behaviors as described in reading instruction textbooks (notably Dechant and Smith, 1977; Lamb and Arnold, 1976; and Sanchez, 1972) and preliminary observation and content analysis of the videotaped teacher lessons used in this study, ten teaching behaviors were isolated. Six of the behaviors were then subdivided into three to five modalities, bringing the total number of observable teaching techniques to 27. In addition, two student behaviors, subdivided into four modalities were identifed.

The teacher behaviors included modeling; questioning (related or unrelated to text, personal, detailed, inferential); focusing on reading (sub)-skills (decoding, vocabulary, grammar, orthography); engaging pupils in reading (sentence, paragraph, page); making use of materials (drawings, chalkboard, motivation, clarification); explaining; summarizing; correcting (errors in decoding, comprehension--directly or indirectly); evaluating (story sequence, remembering details, understanding literary concepts, vocabulary); and reinforcement. The detailed description of the teacher and student behavior is included in Appendix A, and the Spanish reading videotape observation instrument is presented in Appendix C.

In establishing the teaching techniques it was decided to focus on cognitive behaviors as opposed to affective ones because of the former's usefulness in teacher training.

METHOD

Subjects: Teachers

Eighteen volunteer Spanish reading teachers from school districts in the San Francisco Bay Area took part in the study. These teachers had at least one year of experience in teaching reading in Spanish in bilingual programs, had taught Spanish-speaking pupils previously, and had Spanish-speaking students reading in Spanish at the intermediate level for the 1976-77 academic year.

The participants included both certified teachers (N=13) and teacher aides (N=5) regularly assigned to teach Spanish reading. Teacher aides were included because they are often in charge of Spanish reading instruction in bilingual programs. Five of the teachers had between one and two years of teaching experience, six had between three and four years, and the other seven had five years or more. The Spanish Proficiency Test and the Spanish Reading Methods Test for Teachers, two subtests of the CERAS Teacher Tests for Spanish/English Bilingual Education, were administered to all participating teachers to measure both their command of the Spanish language and their knowledge about reading pedagogy in Spanish.

Subjects: Students

Students were selected on the basis of their reading ability in Spanish (i.e., intermediate level) rather than their grade level. The students (N=148) were between 6 and 12 years of age (average age 9 years, s.d.#=#1.25) and were in grades 1 through 6, with most in the third grade. The mean number of students per class was eight.

Student achievement in Spanish reading was measured in terms of mean adjusted gains scores on the Inter-American Prueba de Lectura, Level II, containing 40 vocabulary items and 40 comprehension questions, with a total test score of 80. The pretest was administered in February 1977, before the teachers taught the first control lesson (Lesson I), and the posttest in May 1977, after the teachers had taught the second control lesson (Lesson II). It was possible to measure student gains over a three-month interval. Table 1 shows the split-half reliability for the vocabulary and comprehension sections of the Inter-American Spanish reading test.

TABLE 1

Split-Half Reliability Coefficients for the Vocabulary and Comprehension Subtests of the Inter-American Prueba de Lectura, Level II

Test	No. of subjects	No. of items	Mean Score	SD	Reliability coefficient
Vocabulary	149	40	28.83	6.88	.91
Comprehension	149	40	26.68	6.55	.91
Total Test	149	80	57.52	11.93	--

Note: SD= Standard deviation

Spanish Reading Lessons

The 18 Spanish reading teachers were given two curriculum units ("¿Dónde vamos a jugar?" and "La Garza") selected from the reading lessons

prepared by the Spanish Curriculum Development Center, Dade County, Florida. Each reading unit included lesson guides. The teachers were instructed to teach each reading lesson in two twenty-minute segments, thus allowing for four videotaping sessions. The first and second parts (two twenty-minute segments) of each lesson were taught on consecutive days. Since the intent was to observe differences in teaching behaviors, no effort was made to suggest ways of teaching the four videotaped lessons.

Although some questions have been raised about the utilization of videotaping in classroom research (e.g., the narrow focus of the camera and the intrusion created by the technician and his equipment), the advantages of videotape technology were felt to overweigh the disadvantages. Since the number of students in each class was small (a mean of 8), the camera could focus on both teacher and pupils, and the use of a small microphone, which was either hung from the ceiling or placed on a table, resulted in good sound recording. The location of the technician and the camera (about eight to ten feet from the group) was generally perceive as unobtrusive by the students and the teacher.

More important, the use of videotaped lessons allowed for the development of an observation instrument to record teaching behaviors during Spanish reading instruction. This process lasted about two weeks during which time teachers were repeatedly observed in order to establish the most frequent and observable teaching techniques. The videotaped lessons also provided the opportunity to develop intercoder reliability. Table 2 shows the coefficients of intercoder reliability among four raters for the various teaching and student behavior categories. These coefficients were obtained from a random sample of eight teachers for

TABLE 2

Intercoder Reliability Coefficients[a] for

Reading in Spanish Cognitive Behaviors

Behavior categories	Code	Intercoder agreement (Pearson r)
Teacher behaviors		
Modeling	MODEL	.963
Questioning without Textbook - Personal	QWOTP	.945
Questioning without Textbook - Inferential	QWOTI	.980
Questioning with Textbook - Personal	QWTP	.795
Questioning with Textbook - Detail	QWTD	.940
Questioning with Textbook - Inferential	QWTI	.570*
Reading Skills - Decoding	RSDEC	.940
Reading Skills - Vocabulary	RSVOC	.880
Reading Skills - Grammar	RSGRA	.980
Reading Skills - Spelling	RSSPEL	**
Reading - Sentence	RSENT	.803
Reading - Paragraph	RPARA	.960
Reading - Page	RPAGE	.970
Use of Materials - Drawings	UMDRA	.880
Use of Materials - Chalkboard	UMCHAK	.925
Use of Materials - Motivation	UMMOT	.825
Use of Materials - Clarification	UMCLAR	.835
Explaining	EXPLAIN	.935
Summarizing	SUMMAR	.730

Behavior categories	Code	Intercoder agreement (Pearson r)
Correcting - Decoding	CORDEC	.975
Correcting - Comprehension (Direct)	CORCOMD	.935
Correcting - Comprehension (Indirect)	CORCOMI	.810
Evaluating - Sequence	EVALSEQ	**
Evaluating - Memorization	EVALMEM	.965
Evaluating - Literary Concept	EVALITER	1.000
Evaluating - Vocabulary	EVALVOC	.855
Reinforcement	REINFOR	.905
Student behaviors		
Answering - Questions	ANSQUES	.960
Answering - Evaluation	ANSEVAL	.990
Reading - Outloud	READOUT	.890
Reading - Silently	READSIL	.945

*Not included in the subsequent analysis because of its very low reliability.

**Frequency of behavior was too infrequent. Coefficient could not be computed.

[a]The coefficient of intercoder agreement was computed by first obtaining a Pearson correlation for each pair of coders, then transforming these correlations into z-scores and averaging them, and finally transforming the average z-score into a Pearson correlation coefficient.

the two lessons after a one-month period of videotape observations.

Unit of Analysis

The utterances of teachers and pupils were utilized as the basic unit of analysis for the behavior categories in the Spanish reading videotape observation instrument. "Utterance" was defined as a statement containing a complete message or thought. Utterances such as "¿Quién tiró la basura?" "¿Cómo se llaman los niños?" and "¿Por qué estaba furioso el Sr. Miguel?" would count as three examples of questions with textbook - detail (QWTD). The minute was the unit of time used to record the frequency of utterances. Teachers were instructed to teach each of the four lessons within a twenty-minute time period. If any lesson lasted more or less than twenty minutes, the frequency of utterances assigned to each observational category was prorated.

According to Dunkin and Biddle (1974), teaching behaviors can be recorded in terms of phenomenal units (i.e., behavioral acts such as giving a command or asking a question) and analytical events (i.e., repetitive sequences such as episodes of teaching cycles). McDonald and Elias (1976) argue for the selection of an analytical event rather than a behavioral act as the unit of analysis. They also argue for a focus on the duration of the event (i.e., "evaluating") rather than on its occurrence per unit of time. In their opinion, when frequencies are counted, there is an assumption that each instance of the event has equal psychological effect irrespective of its duration. "We also assume that the repetitions have a cumulative effect; otherwise there would be no point in summing frequencies" (p. 197). The counterargument is that the

impact of psychological stimulus may not always be a function of its duration and that, in fact, repetitions of a stimulus may be more additive than suspected. In the absence of unambiguous findings about stimulus and response, one set of assumptions should not be discarded in favor of another set equally unsupported.

While an analytical event may in fact represent a more complete and presumably stable classroom transaction, the selection of an utterance may be appropriate in this case, particularly when limited knowledge exists about how learning occurs and what constitutes teaching or learning cycles in the Spanish reading classroom.

FINDINGS

Frequency of Teacher Utterances

The frequency of teacher utterances across the behavior categories for the two reading lessons (four videotaped sessions) are included in Table 3. Teaching reading skills (i.e., decoding and grammar) was the most common teaching behavior in the case of twelve teachers (67 percent). Questioning was the second most frequent behavior with six teachers (33 percent) emphasizing it. Relatively infrequent teaching behaviors were: explaining (i.e., literary concepts) and summarizing (i.e., a synopsis of the story). Appendix B shows the mean and standard deviation for each behavior across the two lessons.

There were considerable differences in the pace (frequency of utterances) and variety (types of behaviors) of the lessons. While one teacher produced close to 700 utterances during the two lessons, another

TABLE 3

Frequency of Teacher Utterances across Teaching behaviors for All Reading Lessons

Teacher No.	Model-ing	Ques-tion-ing	Read-ing skills	Read-ing	Explain-ing	Summa-rizing	Correct-ing	Evalu-ating	Total
1	47	149	154	27	30	2	37	24	470
2	42	136	214	23	21	0	33	27	496
3	130	124	157	45	12	2	25	54	549
4	22	175	183	41	10	8	42	47	528
5	37	93	120	87	43	23	69	53	525
6	31	93	325	25	10	1	81	22	588
7	150	165	271	32	26	2	27	22	695
8	37	149	161	46	42	8	15	59	517
9	68	141	130	27	71	38	34	49	558
10	1	167	174	48	27	2	91	11	521
11	27	175	124	32	5	30	38	26	457
12	104	98	186	28	7	6	8	27	464
13	0	206	122	41	5	15	42	49	480
14	39	150	136	37	30	3	23	6	424
15	54	98	118	42	18	3	60	37	430
16	12	176	165	74	11	14	26	32	510
17	26	227	126	21	32	31	33	39	535
18	2	169	56	39	20	13	30	57	386

teacher produced 386, about half the pace of the fastest teacher. The twelve teachers who focused on reading subskills tended to ask students to read aloud from the text, to involve their students by asking questions, and to correct those students making reading errors (i.e., decoding and comprehension). The other six teachers tended to ask many questions, a number of which were not related to the text, to devote less time to reading subskills and reading aloud, and to provide less correction for pupil errors related to the text.

Relation of Teacher Behaviors to Pupil Achievement

In order to study the relationship of teaching behaviors to pupil achievement in Spanish reading, the following variables were investigated:

Independent (teacher) variables: (1) Scores of the Spanish Proficiency test and the Spanish Reading Methods test and (2) frequency (actual or prorated) of selected teacher and pupil behaviors.

Dependent (pupil) variables: Mean adjusted gain scores on the Inter-American Reading tests (comprehension, vocabulary, and total test scores).[1]

The main findings concerning the relations of these independent and dependent variables are summarized in Tables 4 and 5. As can be seen from Table 4, five teaching behaviors were found to be strongly and positively associated with student achievement:

1. Reading Skills, Decoding (RSDEC): indentifying individual letters and/or sequences (combinations) of letters in words;

[1]All mean pupil scores are class means.

TABLE 4

Correlations of Adjusted Pupil Achievement Scores with Teacher Behavior and Teacher Scores on Spanish Proficiency and Spanish Reading Methods Tests

(Teacher N = 18)

Teacher behavior	Comprehension score	Vocabulary score	Total score
Modeling	.17	.42	.31
Questioning-without textbook personal	.08	.22	.17
Questioning-without textbook inferential	.07	-.12	-.11
Questioning with textbook-personal	.02	-.09	-.07
Questioning with textbook-detail	-.18	-.62*	-.38*
Reading Skills-Decoding	.66*	.46*	.68*
Reading Skills-Vocabulary	-.39*	-.30	-.44*
Reading Skills-Grammar	.28	.48*	.41*
Reading-Sentence	.31	.49*	.50*
Reading-Paragraph	-.46*	-.02*	-.30
Use of Materials-Drawings	-.14	-.31	-.05
Use of Materials-Chalkboard	.48*	.47*	.56*
Explaining	.28	.19	.23
Correcting-Decoding	.38*	-.04	.23
Correcting-Comprehension (Direct)	.29	.42	.36
Correcting-Comprehension (Indirect)	.37	-.15	.20
Evaluating-Sequence	-.28	.06	-.15
Evaluating-Vocabulary	.01	.25	.17
Reinforcement	.22	-.15	.09
Pupil behaviors			
Answering-Evaluation	.10	.31	.20
Reading-Outloud	.35	.33	.44*
Teacher tests			
Spanish Proficiency	.30	.50*	.44*
Spanish Reading Methods	-.22	-.24	-.25

*$p < .05$

also dividing word into syllables and noting the place of the accent mark.

2. Reading Skills, Grammar (RSGRA): explaining or reviewing Spanish grammatical rules (i.e., formation of plurals, verb conjugations, and concordance).
3. Reading, Sentences (RSENT): asking the student to read aloud one or several sentences from a paragraph thus providing the teacher the opportunity to monitor the student's mastery of reading subskills (i.e., decoding, correct syllable stress in words, and comprehension).
4. Correcting - Decoding (CORDEC): correcting pupil errors in decoding words (i.e., incorrect syllable stress, incorrect syllabication, and dialect interference).
5. Use of Materials - Chalkboard (UMCHAK): using the chalkboard to write words or sentences, thus emphasizing reading subskills (i.e., decoding, word formation, and word order in sentences).

Teaching behaviors negatively associated with student growth were:

1. Questioning with Textbook, Detail (QWTD): asking the students questions about details in the story (i.e., who, what, when, and where?) which tested the student's memory ability more than his mastery of reading skills (i.e., decoding and sentence comprehension).
2. Reading Skills, Vocabulary (RSVOC): explaining or asking students to provide the meaning of new words or

phrases, particularly through the use of definitions, synonyms, or English equivalents; some attention was devoted to word formation processes, but no emphasis was given to the contextual cues in the sentence as a means to teach new vocabulary.

3. Reading, Paragraphs (RPARA): asking the student to read whole paragraphs without focusing on decoding skills, sentence comprehension, and word meaning.

The date in Table 4 also indicate a significant positive relationship between teachers' proficiency in Spanish and pupil achievement scores. A somewhat surprising result is that pupil achievement scores and teacher performance on the Spanish Reading Methods test show a negative relationship. This result, however, replicates the findings of the research conducted in 1975-76 (Merino and Politzer, 1977) and strongly suggests the need for a different type of teacher test in Spanish reading methods.

Table 5 presents the results of a regression analysis undertaken to assess the independent as well as combined effects of selected statistically significant teacher behaviors as predictors of adjusted class gains on the Inter-American Reading Test (Prueba de Lectura, Level II). Also entered in regression were the teachers' scores on the Spanish Proficiency Test.

The teaching of decoding skills, asking the student to read sentences aloud, and correcting errors in decoding were the three behaviors which had strong independent effects and contributed significantly to pupil achievement in Spanish reading. The teaching of grammar

TABLE 5

Regressions of Pupils' Adjusted Mean Gain Scores on Selected Teacher Behaviors and Spanish Proficiency Test Score

Teacher behavior	Inter-American Reading Test (Total score)		
	Beta Weight	R^2 Change	F Ratio
Reading Skills - Decoding (RSDEC)	.422	.377	3.12*
Reading Skills - Grammar (RSGRA)	.276	.001	2.08
Reading - Sentences (RSENT)	.360	.159	4.03*
Correcting - Decoding (CORDEC)	.283	.063	3.46*
Use of Materials - Chalkboard (UMCHAK)	.097	.009	.23
Score on Spanish Proficiency Test (TOTSPPRO)	.227	.192	1.79
	R^2=.80		
	Adjusted R^2=.69		

*p < .05

R^2=variation

and the use of materials (chalkboard) made positive but statistically nonsignificant contributions to reading achievement scores. Similarly, teachers' scores on the Spanish Proficiency Test made a small, positive contribution to pupil gains.

The selected teacher behavior and proficiency in Spanish account for approximately 70 percent of the observed variance of class mean scores. The R^2 coefficient was .69, adjusted for the small sample size.

Relation of Teaching Behaviors of High, Middle, Low Achieving Teacher Groups to Pupil Achievement

The correlations between teaching behaviors and student growth (Table 4) and the regression analysis used to assess the independent as well as combined effects of statistically significant teaching behaviors as predictors of pupil achievement (Table 5) were based on the entire sample of eighteen teachers. Both analyses assumed a linear relationship between teaching behaviors and student language learning (i.e., "high" achieving teachers had (1) higher mean scores than "middle" and "low" achieving teachers on the five teaching behaviors associated with student growth and (2) lower mean scores on the three negative behaviors).

In order to verify this statistical relationship, the eighteen teachers were classified as high, middle, and low achieving according to their pupils' mean adjusted posttest scores on the Inter-American Reading Test (Prueba de Lectura, Level II).

The mean (frequency) scores and standard deviations of the high, middle, and low achieving teachers on the various teacher and student behavior categories are included in Appendix E.

One-way analyses of variance with contrast were used to examine the differences between high/middle, high/low, and middle/low teacher groups. Statistically significant contrast differences between the teacher groups on the various teacher and student behavior categories are presented in Table 6.

For the most part, the significant contrast differences between the high/low and middle/low teacher groups confirmed the linear relationship of teaching behaviors (positively or negatively) associated with pupil achievement and paralleled the results reported in Tables 4 and 5. On positive teaching behaviors:

1. Reading Skills-Decoding. High achieving teachers focused more on decoding skills than low achieving teachers.
2. Reading-Sentences. High achieving teachers engaged their students more in reading sentences aloud than middle achieving teachers.
3. Scores on Spanish Proficiency Test. High achieving teachers had statistically significant higher scores on the Spanish Proficiency Test than middle achieving teachers and low achieving teachers.

and on the negative teaching behaviors:

4. Questioning with Textbook-Detail. High achieving teachers asked fewer questions about details in the text than middle achieving teachers.
5. Reading-Paragraphs. High achieving teachers engaged their students less in reading whole paragraphs than

Table 6

Significant Contrast Differences between High (H)/Middle (M), High (H)/Low (L), and Middle (M)/Low (L) Teacher Groups (T G) on Teacher and Student Behavior Categories for Inter-American Prueba de Lectura, Level II

Teacher and student behavior categories	H(N=5)/M(N=9) T G	H(N=5)/L(N=4) T G	M(N=9)/L(N=4) T G
MODEL	-2.11*	NS	NS
QWOTI	NS	NS	2.13*
QWTD	2.55*	NS	NS
RSDEC	NS	-3.26**	NS
RSSPEL	-2.32*	NS	NS
RSENT	-2.21*	NS	NS
RPARA	2.28*	NS	NS
TOTSPPRO	-3.60*	-2.24*	NS

*Indicates T-values with a statistically significant level $\leq .05$ (d.f.=15.0).

**Indicates T-values with a statistically significant level $\leq .01$ (d.f.=15.0).

Note: NS=not significant. TOTSPPRO=Spanish Proficiency Test.

middle achieving teachers.

The behaviors Reading Skills-Grammar, Correcting-Decoding, and Use of Materials-Chalkboard, which were positively associated with pupil achievement, did not appear to be significant categories when the three teacher groups were contrasted. Of these three, however, only Correcting-Decoding had a strong independent effect which contributed significantly to reading achievement (see Table 5). Reading Skills-Vocabulary, a behavior which was negatively associated with student growth, was not a significant category in the analysis contrasting the differences among the three teacher groups.

The use of Modeling, which did not appear to be a significant behavior in the analyses presented in Tables 4 and 5, was a significant category in the contrast differences between the high/middle achieving teacher groups.

Relation of Teacher Characteristics to Pupil Achievement

A number of teacher characteristics correlated positively with the students' Spanish reading achievement. Statistically significant correlations included (a) teacher's birthplace (r=.48*) and childhood (r=.57*) in a Spanish-speaking environment (Latin America, Mexico, or the Southwest), (b) professional preparation, i.e., years of schooling (r=.52*), (c) years of teaching experience (r=.56*), and (d) course work in reading methods (r=.44*).

Negative associations (statistically nonsignificant) between teacher

*p<.05

characteristics and student achievement in Spanish reading included (a) course work in Spanish literature (r=-.03), (b) course work in Spanish dialectology (r=-.17), (c) general courses in bilingual education (r=-.32), and (d) performance on the Spanish Reading Methods Test (r=-.25). These findings seem to suggest that courses in Spanish literature and/or dialectology as well as general knowledge about bilingual education may not provide teachers concerned with Spanish reading instruction with the appropriate teaching strategies or relevant knowledge necessary to teach Spanish reading skills to Spanish-dominant pupils in elementary schools.

DISCUSSION

The teaching methods used by the eighteen teachers revealed interesting patterns of behavior. The teaching of reading subskills (i.e., decoding and grammar or structural analysis) was the most common strategy among twelve of the teachers (67 percent). Questioning was the second most frequent behavior, with six teachers (33 percent) emphasizing it. Explaining (i.e., literary concepts) and summarizing (i.e., a synopsis of the story) were relatively infrequent behaviors. The twelve teachers who focused on reading subskills tended to ask students to read aloud from the text, to involve their students by asking questions related to the text, and to correct those students making errors in decoding or comprehension. The other six teachers tended to ask many questions, a number of which were not related to the text, to devote less time to reading subskills and reading aloud, and to provide less

time to reading subskills and reading aloud, and to provide less correction for pupil errors related to the text.

The profiles of the twelve teachers who focused on reading subskills paralleled the five teaching behaviors which were positively associated with student achievement. These included (a) teaching of decoding skills (RSDEC), (b) teaching of grammar - structural analysis (RSGRA), (c) asking pupils to read sentensed aloud (RSENT), (d) correcting pupil error in decoding (CORDEC), and (e) using the chalkboard to write words or sentences (UMCHAK), thus emphasizing reading subskills. The behavioral configuration of the other six teachers to an extent correlated with the behaviors found to contribute negatively with student growth. These were (a) asking questions of details about the story which stressed the pupil's memory ability more than his mastery of reading skills (QWTD), (b) teaching the meaning of words through the use of definitions, synonyms, or English equivalents with no emphasis given to the contextual cues in the sentence as a means to teach new vocabulary (RSVOC), and (c) asking the student to read whole paragraphs without focusing on decoding or comprehension skills (RPARA).

The selected teacher behaviors and proficiency in Spanish, based on a regression analysis, accounted for approximately 70 percent of the variation in student achievement in Spanish reading. While teacher performance on the Spanish Reading Methods Test showed a negative association with pupil gains, a separate analysis did reveal a statistically significant correlation between course work in reading methods and pupil reading achievement.

In considering the significance of the "successful" teaching behaviors and their usefulness in teacher training, one needs to keep in mind the underlying competencies. A teacher who is not proficient in Spanish will be unable to teach decoding skills, to correct errors in decoding, or to teach structural analysis successfully. Similarly, if this same teacher is unfamiliar with reading methodology, he/she will engage students in language activities (i.e., asking the student to read whole paragraphs) which do not necessarily promote reading achievement.

APPENDIX A

Protocol of Teacher and Student Behaviors Utilized

in the Spanish Reading Lessons

Teacher Behavior	Operational Definition
Modeling / Modelando	La maestra lee en voz alta ya sea del texto, de hojas mimeografeadas, o de la pizarra. O pide al estudiante que repita lo que ella lee o dice. Incluye el pedido de repetir en sí. Este modelado puede ocurrir en conjunción con la lectura de los estudiantes. Este modelado incluye palabras y sílabas de palabras. Este modelado también se refiere a la presentación de términos por la maestra. M: "Ahora, vamos a ver la palabra jugar". M: Bandada, ¿quién me lee la palabra bandada?
Questions / Preguntas	La maestra hace preguntas relacionadas con la lección.
(Personal, without Textbook) (Sin Texto, Personales)	Preguntas sobre descripción de experiencias u opiniones personales del niño, sin texto. M: ¿Han querido Uds. jugar en la calle alguna vez? M: ¿Cómo son las aves? M: ¿Por qué es peligroso jugar en la calle?
(Inferential, without Textbook) (Sin Texto, Inferenciales)	Preguntas inferenciales, sin texto. Se aplica a casos supuestos, que requieren imaginación o elaboración. M: Si tú quieres jugar y alguien no te deja ¿es esa persona mala?

Teacher Behavior	Operational Definition
(Personal, with Textbook) (Con Texto, Personales)	Preguntas sobre descripción de experiencías u opiniones del niño, con texto. Incluye preguntas que piden al niño que se ponga en el lugar de uno de los personajes. M: Qué hubieras hecho si el policía te pescaba jugando en la calle? M: Qué te gustó más de la fábula?
(Detail, with Textbook) (Con Texto, Detalle)	Preguntas de detalle acerca de la historia en el texto, sobre descripciones relacionadas con el texto o que complementan el texto. M: ¿Cómo se llama el dueño del solar? M: ¿Qué plumas se puso la garza? M: ¿Cuál es la moraleja de la fábula? M: (La maestra enseña dibujos de una garza y una pava) ¿Crees que estos animales son iguales?
(Inferential, with Textbook) (Con Texto, Inferenciales)	Preguntas inferenciales acerca del texto. (El niño es saliente). M: ¿Quién creen Uds. que ensuciaba el solar del Sr. Miguel? M: ¿Cómo se pegaría la garza las plumas?
Reading Skills - Decoding Destrezas de Lectura - Descifrando	La maestra llama la atención sobre la pronunciación individual de palabras. La maestra explica, hace ejercicios, o pide la identificación de letras o combinaciones iniciales o finales de letras. Esta categoría también incluye cuando la maestra hace hincapié sobre los acentos en la lectura y cuando hace notar el silabeo en la lectura. M: ¿Qué tienen guitarra y

Teacher Behavior	Operational Definition
	Guillermo en común? M: ¿Quién me puede dar palabras que comienzan con ju? M: ¿Qué palabras se oyen igual que colores? Cuando la maestra pide al estudiante que lea palabras que encontrará en la historia, sin la maestra leerlas antes y sin explicar su significado.
Reading Skills - Vocabulary Destrezas de Lectura - Vocabulario	La maestra trata de términos o frases nuevas en el texto. Esta actividad incluye el dar y pedir sinónimos, definir o pedir la definición de términos, decir la palabra en Inglés. También se usa en la formación de palabras. Da o pide sinónimos, o solicita palabras de significado similar. Incluye pedidos no verbales, señalando al estudiante. M: Solar es otra manera de decir lote. M: ¿Qué más hay? Explica o pide explicación de términos. Incluye pedidos no verbales, señalando al estudiante. M: ¿Quién me dice que quier decir jugar? M: ¿Qué es una acera? M: ¿Cuáles son las características de una fábula? Usa palabras en contexto como ejemplo. M: Los niños jugaban en la acera. ¿Dónde jugaban? Explica cómo nuevas palabras se forman al añadir sufijos o prefijos.

Teacher Behavior	Operational Definition
	M: Perjurar viene de jurar.
Reading Skills - Grammar Destrezas de Lectura - Gramática	La maestra examina, repasa o explica la conjugación y tiempo de verbos, concordancia (número o género) de verbos, adjetivos y sustantivos. La formación de plurales va dentro de esta categoría. Cuando el estudiante conjugue verbos, se anotará cada conjugación (yo voy, tu vas, el va, etc.) separadamente. M: ¿Qué es singular? M: ¿Cuál es el presente del verbo graznar? M: Un lápiz pero dos lápices. M: Cuando una palabra termina en emos quiere decir nosotros.
Reading Skills - Spelling Destrezas de Lectura - Ortografía	La maestra pregunta o explica el uso de los signos de puntuación y de las letras mayúsculas y minúsculas, en referencia a su forma escrita. M: ¿Por qué tiene policía un acento? Porque se pronuncia policía. M: Miguel se escribe con eme mayúscula. Si la maestra se refiere a la forma escrita de palabras, esto va bajo ortografía. M: "Narices se escribe con c en el plural".
Reading - Sentence Leyendo - Oración	La maestra le pide al estudiante que lea una oración.
Reading - Paragraph Leyendo - Párrafo	La maestra le pide al estudiante que lea un párrafo.
Reading - Page Leyendo - Página	La maestra le pide al estudiante que lea una página.

Teacher Behavior	Operational Definition
Use of Materials - Drawings Uso de Materiales - Dibujos	La maestra usa (1) dibujos del texto o fuera del texto.
Use of Materials - Blackboard/Cards Uso de Materiales - Pizarra/Tarjetas	La maestra usa (2) la pizarra o tarjetas con palabras escritas.
Use of Materials - Motivation Uso de Materiales - Motivación	La maestra usa (1) o (2) para motivar al estudiante, es decir, para atraer su interés.
Use of Materials - Clarification Uso de Materiales - Aclaración	La maestra usa (1) o (2) para aclarar detalles de comprensión sobre la historia o sobre el vocabulario.
Explaining Explicación	La maestra explica conceptos literarios como "fábula", "leyenda", "moraleja", y "realidad vs. fantasía". Incluye historias, autores, referencias literarias. M: La moraleja nos da una lección. M: En la fábula los animales hablan.
Summarizing Recuento	La maestra introduce una sinopsis de lo leído o repite oralmente la historia, o presenta una breve introducción acerca de la historia. Incluye contextualización de preguntas. M: Los niños no tenían dónde jugar y sabían que no podian jugar en la calle ¿verdad?
Correcting - Pronunciation Corrección - Pronunciación	La maestra corrige pronunciación regional o pronunciación de sílabas de los estudiantes al leer. Incluye corrección de la entonación del estudiante al leer. M: No se dice polecía sino policía. M: Dijimos, no dejimos.
Correcting - Comprehension (Directly)	La maestra corrige la comprensión del vocabulario o de lo leído por

Teacher Behavior	Operational Definition
Corrección - Comprensión (Directamente)	el estudiante - directamente. Esta corrección no incluye dar la respuesta necesariamente. M: No, el Sr. Miguel estaba furioso. Guillermo, no.
Correcting - Comprehension (Indirectly) Corrección - Comprensión (Indirectamente)	La maestra corrige la comprensión - indirectamente. Le pregunta a otro estudiante. M: "¿Cómo saltaron los niños?" (La respuesta era "dificilmente", pero el estudiante no habia respondido). Ayuda a precisar la respuesta. Dice que algo le falta a la pregunta o lo insinúa. M: "¿Cómo se sentía la garza?" (El estudiante había respondido que se sentía molesta). M: ¿Qué hay algo de malo en tu respuesta? M: Los niños jugaban, pero ¿dónde? Indica con gestos que la respuesta no es apropiada.
Evaluating - Sequence Evaluación - Ordenamiento	Ordenamiento. La maestra hace preguntas para determinar si el estudiante puede describir el orden de los acontecimientos en la historia o pide un resumen de la historia. M: ¿Qué pasó después que los niños hablaron con el policía? M: Pon las frases en el orden en que sucedieron. (Los niños arreglan el orden de unas tarjetas).
Evaluating - Memorization	Memorización. La maestra pide al

Teacher Behavior	Operational Definition
Evaluación - Comprensión: Memorización	estudiante que describa lo leído con anterioridad. M: ¿Cómo se sintió la garza al fin? La maestra pregunta acerca de la veracidad de cierta referencia o comentario acerca de la historia o si recuerdan nombres de personajes. M: Voy a decir unas oraciones y Uds. me dicen si es cierto que pasó o no en la historia.
Evaluating - Literary Concept Evaluación - Concepto Literario	La maestra le hace una pregunta al estudiante de algo que ella ya explicó. M: ¿Quién me dice las caracteristicas de una fábula?
Evaluating - Vocabulary Evaluación - Vocabulario	La maestra examina si el estudiante conoce bien el vocabulario ya sea pidiéndole definiciones u oraciones usando la palabra. Incluye parafrasis. M: Hazme una oración con la palabra sigiloso. M: Dime que es un solar.
Reinforcement Refuerzo	La maestra repite la palabra, frase, u oración contestada o leída por el estudiante. M: ¿Cómo es una garza? E: Es un animal de patas largas. M: Es un animal de patas largas. En caso de que la maestra refuerce y use el refuerzo para hacer una pregunta, se anotará esta acción como refuerzo y pregunta a la vez. M: ¿Dónde juegan los niños? E: Abajo de la banqueta.

Teacher Behavior	Operational Definition
	M: Abajo de la banqueta ¿y por dónde es eso?
Answering - Questions Respondiendo - Preguntas	Se refiere a conductas del estudiante al responder preguntas que no están dentro de la evaluación. A veces el estudiante no habla pero lleva a cabo la acción requerida (Ejem.: Va a la pizarra a subrayar, señala, o pone algo en orden).
Answering - Evaluation Respondiendo - Evaluación	Se refiere a conductas del estudiante dentro del ciclo de evaluación.
Reading - Outloud Leyendo en Voz Alta	La maestra le pide al estudiante que lea en voz alta.
Reading - Silently Leyendo en Silencio	La maestra le pide al estudiante que lea en silencio.

APPENDIX B

FREQUENCY OF TEACHER BEHAVIOR ACROSS LESSONS

Teacher behavior	Lesson I		Lesson II	
	$\bar{X}$	SD	$\bar{X}$	SD
MODEL	20.17	26.00	25.83	24.08
QWOTP	12.83	7.29	14.06	11.66
QWOTI	3.44	7.25	2.94	4.17
QWTP	5.65	8.62	2.89	4.17
QWTD	54.44	23.67	32.89	15.13
QWTI	14.89	9.29	5.67	4.41
RSDEC	45.67	29.86	28.28	22.14
RSVOC	23.56	17.59	46.33	19.07
RSGRA	10.39	20.42	3.72	7.51
RSSPEL	3.83	8.23	0.56	0.92
RSENT	9.22	11.38	13.11	8.14
RPARA	3.50	5.54	3.22	3.47
RPAGE	7.39	4.25	3.28	2.61
UMDRA	6.44	5.46	6.89	5.88
UMCHAK	43.89	37.91	33.22	20.38
UMMOT	42.50	35.00	33.44	20.98
UMCLAR	4.61	7.26	6.67	7.11
EXPLAIN	3.33	5.42	19.94	13.96
SUMMAR	6.06	5.44	6.33	6.97
CORDEC	2.28	3.66	9.78	9.89

Teacher behavior	Lesson I		Lesson II	
	$\bar{X}$	SD	$\bar{X}$	SD
CORCOMD	5.61	5.55	5.17	6.63
CORCOMI	9.56	6.09	7.33	4.64
EVALSEQ	1.56	5.68	0.00	0.00
EVALMEM	13.44	8.75	12.94	8.26
EVALITER	0.06	0.24	7.61	6.75
EVALVOC	4.89	5.29	7.56	7.33
REINFOR	89.17	36.34	66.67	23.05
Student behavior				
ANSQUES	142.44	48.88	98.50	43.19
ANSEVAL	18.00	12.46	22.22	12.15
READOUT	34.33	32.13	36.67	20.52
READSIL	9.78	6.99	6.72	6.32

Note: $\bar{X}$=Mean.
SD=Standard Deviation.

APPENDIX C

Teacher's I.D. #_____ Lesson _____ LECTURA VIDEOTAPE OBSERVATION - COGNITIVE BEHAVIORS Coder _____

Category	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	Total
Modelado																														
Pre-Sin T-Per																														
Pre-Sin T-Inf																														
Pre-Con T-Per																														
Pre-Con T-Det																														
Pre-Con T-Inf																														
Dest-De																														
Dest-Voc																														
Dest-Gram																														
Dest-Orto																														
Mat-Dib																														
Mat-Piz																														
Mat-Mot																														
Mat-Acl																														
Explic																														
Pre Ling																														
Recuento																														
Corr-Pro																														
Corr-Dir																														
Corr-Ind																														
Inc. Stud O																														
Inc. Stud P																														
Inc. Stud Fo																														
Ev-Ord																														
Ev-C Memo																														
Ev-C Concept																														
Ev-Voc																														
Refuerzo																														
Resp-Pre																														
Resp-Ev																														
Leyendo-A																														
Leyendo-S																														

APPENDIX D

CORRELATIONS BETWEEN STUDENT GROWTH AND READING TEACHING BEHAVIORS

	MODEL	QUOTP	QUOTI	QUTP	QUTD	RSDEC	RSVOC	RSGRA	RSENT	RPARA	UNDRA	UNCHAK	EXPLAIN	CORDEC	CORCOMD	CORCOMI	EVALITER	EVALVOC	REINFOR	ASSEVAL	READOUT
ADCACON[1]	.174	.078	.065	.018	-.178	.663	-.387	.280	.306	-.455	.139	.484	.283	.384	.290	.373	-.283	.007	.219	.101	.345
ADCAVOC[2]	.416	.218	-.117	-.087	-.618	.462	-.301	.482	.488	-.022	-.307	.471	.186	-.039	.420	-.155	.039	.252	-.146	.310	.324
ADCAREA[3]	.306	.165	-.107	-.065	-.380	.680	-.444	.408	.500	-.291	-.052	.558	.228	.233	.361	.198	-.152	.173	.094	.256	.437
MODEL	1	-.071	-.129	-.078	-.447	.431	.068	.066	.046	-.122	-.076	.782	.078	-.321	-.050	-.499	-.022	-.084	.097	.053	.253
QUOTP		1	-.082	.186	-.037	.112	-.061	.247	-.126	-.333	.021	-.130	-.165	-.256	.119	.031	.433	-.020	-.020	.099	.015
QUOTI			1	-.215	-.017	-.120	.090	.012	-.090	.112	-.017	-.065	.187	-.044	.055	-.163	-.200	-.155	.014	-.216	-.255
QUTP				1	.187	.094	-.319	-.163	-.215	-.280	-.057	.063	-.030	-.040	-.085	-.182	.403	.268	-.000	.308	-.180
QUTD					1	-.228	-.017	-.440	-.183	-.008	.295	-.232	-.241	.088	-.527	.178	.124	-.127	.223	.013	-.034
RSDEC						1	-.427	.519	.095	-.267	-.234	.696	-.149	-.092	.312	.170	-.413	.056	.466	-.172	.179
RSVOC							1	.021	-.426	-.005	-.131	-.110	-.040	-.039	-.085	-.225	-.088	-.045	.080	-.256	-.323
RSGRA								1	-.279	.021	-.474	.142	-.250	-.160	.780	.219	-.300	-.022	-.232	-.314	-.289
RSENT									1	-.104	-.044	.232	.137	.238	-.109	.141	-.079	.273	-.272	.402	.705
RPARA										1	-.283	-.283	-.278	-.197	-.083	-.253	.199	.530	.039	.385	-.424
UNDRA											1	-.253	.383	-.087	-.375	.051	.309	-.174	-.001	.097	.177
UNCHAK												1	.032	.036	-.013	-.159	-.357	.166	.261	-.013	.295
EXPLAIN													1	.309	-.113	-.313	.043	-.513	-.111	-.075	.011
CORDEC														1	.051	.354	-.300	-.101	-.186	.105	.007
CORCOMD															1	.284	-.188	-.028	-.145	-.218	-.231
CORCOMI																1	-.423	.045	.141	.058	.051
EVALITER																	1	.255	-.424	.588	.684
EVALVOC																		1	-.215	.460	.094
REINFOR																			1	-.359	-.449
ASSEVAL																				1	.321
READOUT																					1

ADCACON[1] = Adjusted Gain Scores = Comprehension (Inter-American Prueba de Lecture - Level II)

ADCAVOC[2] = " " " Vocabulary "

ADCAREA[3] = " " " Total "

Correlations .387 are significant at the .05 level. Teaching behaviors showing very weak or no association are not included in the matrix.

APPENDIX E

MEAN SCORES AND STANDARD DEVIATIONS FOR HIGH, MIDDLE, AND LOW ACHIEVING TEACHERS ACCORDING TO TEACHER AND STUDENT BEHAVIOR CATEGORIES ON THE INTER-AMERICAN PRUEBA DE LECTURA, LEVEL II

Teacher behavior categories	Teachers High (N=5) Mean	SD	Teachers Middle (N=9) Mean	SD	Teachers Low (N=4) Mean	SD	Total Teachers (N=18) Mean	SD
MODEL	77.00	58.00	30.22	23.89	42.75	43.61	46.00	42.58
QWOTP	34.40	15.63	24.11	10.63	23.50	18.74	26.83	14.00
QWOTI	6.00	4.30	3.44	4.13	13.50	15.46	6.39	8.43
QWTP	5.60	8.74	9.89	14.63	8.50	9.47	8.39	11.75
QWTD	62.80	28.13	98.33	24.65	93.25	21.20	87.33	28.30
QWTI	16.00	12.02	22.33	11.47	22.25	6.40	20.56	10.56
RSDEC	109.40	57.17	74.22	26.78	29.00	22.18	73.94	45.15
RSVOC	56.60	12.62	65.89	23.56	95.50	48.84	69.89	30.57
RSGRA	28.80	42.77	11.78	15.42	1.00	2.00	14.11	25.49
RSSPEL	12.00	14.50	1.88	3.06	0.50	1.00	4.39	8.83
RSENT	35.60	20.50	17.89	11.73	15.75	10.24	22.33	15.96
RPARA	2.00	3.08	11.11	9.20	2.75	4.19	6.72	8.10
RPAGE	9.40	5.22	10.44	6.18	12.75	4.57	10.67	5.44
UMDRA	10.60	8.65	16.00	9.84	10.75	5.38	15.33	8.70
UMCHAK	117.60	80.10	65.11	20.42	53.50	30.49	77.11	50.59
UMMOT	102.80	85.42	74.22	27.51	53.50	28.64	77.56	50.72
UMCLAR	17.60	17.40	8.56	4.23	9.50	12.37	11.28	11.09
EXPLAIN	26.60	15.77	21.89	20.47	22.25	11.44	23.38	16.83
SUMMAR	7.20	9.26	14.22	12.66	13.25	12.55	12.06	11.54

Teacher behavior categories	Teachers High (N=5) Mean	SD	Teachers Middle (N=9) Mean	SD	Teachers Low (N=4) Mean	SD	Total Teachers (N=18) Mean	SD
CORDEC	11.00	16.23	15.89	11.60	4.75	7.54	12.06	12.49
CORCOMD	16.20	17.89	9.89	8.13	6.00	3.74	10.78	11.11
CORCOMI	16.20	8.87	19.11	8.94	12.75	5.91	16.89	8.31
EVALSEQ	5.60	10.43	0.00	0.00	0.00	0.00	1.56	5.68
EVALMEM	25.60	13.65	26.78	11.50	26.50	15.20	26.39	12.13
EVALITER	10.80	4.49	6.78	6.44	5.75	9.60	7.67	6.69
EVALVOC	15.60	5.41	10.79	12.09	8.00	12.19	11.50	10.49
REINFOR	160.80	97.80	156.89	42.72	148.00	37.66	156.00	58.15
Student behavior categories								
ANSQUES	257.60	147.30	242.89	61.00	247.75	52.11	248.06	85.89
ANSEVAL	48.80	16.48	38.00	19.09	34.50	18.93	40.22	18.18
READOUT	91.00	71.57	76.89	28.18	32.75	19.31	71.00	46.10
READSIL	22.80	17.24	11.89	7.41	19.00	11.17	16.50	11.92
TOTSPPRO	54.60	2.30	40.11	8.78	43.75	6.90	44.94	9.28

Note: SD=Standard Deviation. TOTSPPRO=Spanish Proficiency Test.

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